| Index  | Of | Cla | ime   |
|--------|----|-----|-------|
| IIIUEX | UI | Uld | IIIIS |



Application No. Applicant(s)

09/997,503 KIM, HARK-SOO

Examiner Art Unit

TUAN A PHAM

2643

| √ | Rejected |
|---|----------|
| = | Allowed  |

| _ | (Through numeral)<br>Cancelled |
|---|--------------------------------|
| ÷ | Restricted                     |

| N | Non-Elected  |
|---|--------------|
| _ | Interference |

| Α | Appeal   |
|---|----------|
| o | Objected |

| Cla                    | aim      | Date     |          |          |          |              |           | Claim Date |          |           |                        |          |                 | ]:::     | С        | laim      | Date     |         |         |   |          |            |          |          |         |          |          |                 |                  |          |
|------------------------|----------|----------|----------|----------|----------|--------------|-----------|------------|----------|-----------|------------------------|----------|-----------------|----------|----------|-----------|----------|---------|---------|---|----------|------------|----------|----------|---------|----------|----------|-----------------|------------------|----------|
| _                      | <u></u>  | 8        |          | ı        |          |              | ŀ         |            |          |           | _                      | ভ        |                 |          |          |           |          |         |         |   | _        | <u> 7</u>  |          |          | 1       |          |          |                 |                  |          |
| Final                  | Original | 11/30/04 |          |          |          |              | ı         |            |          |           | Final                  | Original |                 |          |          |           |          |         |         |   | Final    | Original   |          |          |         |          |          |                 |                  |          |
| ш.                     | ő        | 1        |          |          |          |              | İ         | ŀ          |          |           | Œ                      | Ö        |                 | ı        |          |           |          |         |         |   | i.       | ō          |          | Ì        |         |          |          |                 |                  |          |
| -                      |          |          |          | +        | 4        |              |           | $\dashv$   | $\dashv$ |           |                        |          | Ш               | _        | -        | $\perp$   | $\perp$  | $\perp$ | $\bot$  | 4 |          |            |          |          | $\perp$ | $\perp$  | $\perp$  | Ш               |                  |          |
|                        | 2        | <b>√</b> |          | -        | +        | $\dashv$     |           |            | $\dashv$ |           |                        | 51       |                 | _        | -        | ╁         |          | _       | -       | 4 |          | 101        |          |          | $\perp$ | ٠.       | ╄        | Ш               | $ldsymbol{oxed}$ |          |
|                        | 3        | 0        |          | +        | +        | $\dashv$     |           |            | $\dashv$ | _         |                        | 52       | -               |          | +        |           | $\dashv$ | _       | 4       | - |          | 102        | _        | $\vdash$ | -       | ╁.       | ┿        | Ш               |                  |          |
|                        | 4        | 7        | -+       | -        | +        | $\dashv$     | $\dashv$  |            | $\dashv$ |           |                        | 53<br>54 | -               | -+       | +-       | ╁         |          | +       | +       | - |          | 103        |          | -        | -       | +        | +        | Щ               |                  |          |
| $\vdash$               | 5        | 1        | +        | ╁        |          | $\dashv$     | $\dashv$  | $\dashv$   |          |           | -                      | 55       | Н               | -+       | -        | -         |          | +       | +       | - |          | 104<br>105 |          | $\vdash$ | +-      | +        | ┼-       | Ш               | Н                | $\vdash$ |
|                        | 6        | √        | -+       | $\dashv$ | -+       | $\dashv$     | $\dashv$  | -          |          |           |                        | 56       |                 |          | +        | +         |          | +       | +       | - |          | 105        |          | $\vdash$ | +-      | +        | +        | ┾┵              | $\vdash$         | -        |
|                        | 7        | Ť        | _        | -+       | $\dashv$ | $\dashv$     | $\dashv$  | -          | +        | _         |                        | 57       | $\vdash$        | +        | +        | -         | +        | +       | -       | - |          | 107        |          | -+       | - -     | -        | +        | $\vdash$        | H                | Н        |
| -                      | 8        | =        | 1        | $\dashv$ |          | $\dashv$     | -         | 寸          | $\dashv$ |           | $\vdash$               | 58       | $\vdash$        | $\dashv$ | _        | ╁─┤       | +        | -       | +-      | ┨ |          | 108        |          |          | +       | +        | +        | $\vdash$        | Н                | Н        |
|                        | 9        | =        | $\dashv$ | 十        | $\dashv$ | -            |           |            | _        |           |                        | 59       | $\vdash$        | $\top$   |          | 1         | $\dashv$ | +       |         | - |          | 109        | _        |          | +       | +-       | ┿        | $\vdash$        |                  | -        |
|                        | 10       | =        | _        | $\dashv$ | _        | $\dashv$     | _         | $\dashv$   | _        | _         |                        | 60       | $\vdash$        | 十        |          | H         | $\dashv$ | +       |         | 1 | <u> </u> | 110        |          | -        | +       | +        | ╁        | H               |                  | $\vdash$ |
|                        | 11       |          |          | T        | $\dashv$ | $\dashv$     |           | 一          | _        |           |                        | 61       |                 | +        |          | $\Box$    | 十        | -       |         | 1 |          | 111        |          |          | +       | +        | ┿┈       | Н               | Н                | -        |
|                        | 12       | П        | _        | $\dashv$ | 1        |              |           | $\neg$     | $\neg$   |           |                        | 62       | H               | $\top$   |          | $\dagger$ | +        | $\top$  | _       | 1 |          | 112        | Н        |          | +       | +        | +        | H               |                  | $\vdash$ |
|                        | 13       |          |          |          | $\neg$   | _            | $\neg$    | $\dashv$   | $\neg$   |           |                        | 63       |                 | $\top$   |          | $\sqcap$  | $\top$   | $\top$  |         | 1 |          | 113        |          |          | 十       | $\top$   | $\top$   | $\vdash$        |                  | $\dashv$ |
|                        | 14       |          |          |          |          |              |           |            |          |           |                        | 64       |                 |          | T        |           | $\top$   | $\top$  | 1       | 1 |          | 114        |          |          | 1       | $\top$   | $\top$   | $\vdash$        | П                | $\vdash$ |
|                        | 15       |          |          |          |          | П            |           |            |          |           |                        | 65       |                 |          |          |           | $\neg$   | T       | 1-      |   |          | 115        |          |          | 7       | T        | 1        | $\vdash$        | П                | $\Box$   |
|                        | 16       |          |          |          |          |              |           |            |          |           |                        | _66      |                 | 7        |          | $\sqcap$  |          |         | 丁       |   |          | 116        |          |          | T       |          | 1        |                 |                  |          |
|                        | 17       |          |          |          |          |              |           |            |          |           |                        | 67       |                 |          |          | П         |          | Т       | $\top$  |   |          | 117        |          |          |         |          |          | П               |                  |          |
|                        | 18       |          |          |          |          |              |           |            |          |           |                        | 68       |                 |          |          |           |          |         |         |   |          | 118        |          |          |         |          | 1        | П               |                  |          |
|                        | 19       |          |          |          |          |              |           |            |          |           |                        | 69       |                 |          |          |           |          |         |         |   |          | 119        |          |          |         | T        | T        | П               |                  |          |
|                        | 20       |          |          |          |          | ightharpoons |           |            |          |           |                        | 70       |                 |          |          |           |          |         |         |   |          | 120        |          |          | T       | Т        |          | П               | П                |          |
|                        | 21       |          |          |          | $\perp$  | $\perp$      |           |            |          |           |                        | 71       |                 |          |          |           |          |         |         |   |          | 121        |          |          | T       | T        | T-       | П               |                  |          |
|                        | 22       |          |          |          |          | _            |           |            | $\perp$  | _         |                        | 72       |                 |          |          |           |          |         |         |   |          | 122        |          |          | T       | T        | Т        |                 | П                |          |
|                        | 23       |          |          |          | 4        | _            |           |            |          |           |                        | 73       |                 |          |          |           |          |         |         |   |          | 123        |          |          |         |          |          |                 |                  |          |
|                        | 24       |          | _        | $\perp$  | _        | 4            |           | _          | $\dashv$ |           |                        | 74       |                 |          |          |           |          |         |         |   |          | 124        |          |          |         |          |          |                 |                  |          |
|                        | 25       | Ц        | _        | 4        | _        | _            | _         | _          | 4        |           |                        | 75       |                 | _        | _        | $\perp$   | $\perp$  |         | _ _     |   |          | 125        |          |          |         |          |          |                 |                  |          |
|                        | 26       |          | _        | _        | _        |              | _         |            | _        |           |                        | 76       | Ш               | _        | ┸        | $\sqcup$  |          |         |         |   |          | 126        |          |          |         | $\perp$  |          |                 |                  |          |
|                        | 27       |          | _        | 4        | 4        | _            | _         | _          | _        |           |                        | 77       | Ш               | _        | _        |           |          | $\perp$ | $\perp$ |   |          | 127        |          | $\perp$  | $\perp$ | ┸        |          |                 |                  |          |
|                        | 28       |          | 4        | 4        |          |              | _         |            | _        |           |                        | 78       |                 | <u>.</u> |          |           |          | $\perp$ |         |   |          | 128        |          |          | $\perp$ | _        | ↓_       | Ш               |                  |          |
|                        | 29       | -        | $\dashv$ | $\dashv$ | +        | -            | _         |            | 4        |           |                        | 79       |                 | $\perp$  | _ _      | $\sqcup$  |          | $\perp$ | $\bot$  | 4 |          | 129        |          | _        | _       | 1_       | _        | Ш               | Ш                | $\Box$   |
| $\vdash$               | 30       | -        | -+       | $\dashv$ | _        | _            | -+        |            | $\dashv$ |           |                        | 80       | _               | 4        | +        | -         | _        | -       | $\perp$ | 4 | <u> </u> | 130        |          | -        | $\bot$  | _        | <u> </u> | Ш               | L                |          |
|                        | 31<br>32 | -        | +        |          | -        | _            | -         | -          | -        |           |                        | 81       | $\vdash$        | +        | _        | -         |          | 1       | +-      | 4 |          | 131        |          |          | 4_      | <u> </u> | <u> </u> | $oxed{oxed}$    | Ш                | _        |
|                        |          |          | $\dashv$ | -        | -        | +            | -         | $\dashv$   | -        |           |                        | 82       | _               |          | -        | -         |          | +       | +-      | - |          | 132        |          |          | -       | ╄        | _        | <u> </u>        | Ш                | _        |
| <del>  </del>          | 33<br>34 | -        | +        | $\dashv$ | -+       |              | $\dashv$  | $\dashv$   | $\dashv$ | _         | $\vdash\vdash\vdash$   | 83       | $\vdash \vdash$ | +        | -        |           | -        | +       | +-      | 4 | <u> </u> | 133        |          | +        | +       | _        | -        | $\sqcup$        | Щ                |          |
| ┝─┤                    | 35       |          | $\dashv$ | -+       | +        | -            |           | -+         |          | -         | $\vdash\vdash\vdash$   | 84<br>85 | $\vdash \vdash$ | +        | +-       | $\vdash$  | +        | +       | +       | - | <u> </u> | 134        | -        |          | +-      | +        | +        | $\sqcup$        | $\square$        | _        |
| $\vdash$               | 36       |          | $\dashv$ | -+       | +        | -+           | ᆉ         | $\dashv$   | $\dashv$ |           | $\vdash \vdash \vdash$ | 86       | $\vdash$        | +        |          | ┼-        | _        | +       | +-      | - | <u> </u> | 135        |          |          | +       | +        | +        | $\vdash$        | $\vdash\vdash$   | _        |
| $\vdash \vdash$        | 37       | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$ | +            | -         | -+         | $\dashv$ | -         | $\vdash \vdash \vdash$ | 87       | $\vdash$        | -        | +        | H         | +        | +       | +       | - | -        | 136<br>137 |          | -        | +       | +        | +        | $\vdash$        | $\vdash$         | ᅴ        |
| ┝─┤                    | 38       | $\dashv$ | $\dashv$ | +        | +        | $\dashv$     | $\dashv$  | $\dashv$   | +        | -         | $\vdash$               | 88       | $\vdash$        | +        | +        | $\vdash$  | +        | +       | +       | - |          | 137        | $\dashv$ | +        | +       | +        | ┿        | ├-┤             | $\dashv$         | _        |
|                        | 39       | -        | $\dashv$ | +        | +        | +            | $\dashv$  | $\dashv$   | $\dashv$ | -         | $\vdash \vdash \vdash$ | 89       | $\vdash \vdash$ | +        | +        | +         | +        | +       | +-      | 1 |          | 138        | $\dashv$ | -        | +       | +-       | ╁        | $\vdash \vdash$ | $\dashv$         |          |
|                        | 40       | $\neg$   | -+       | $\dashv$ | $\dashv$ | +            | $\dashv$  | $\dashv$   | $\dashv$ | -         | ┝─┤                    | 90       |                 | +        |          | ╁┤        | +        | +       | +-      | - |          | 140        |          | +        | +       | +-       | ╁        | Н               | $\vdash$         | $\dashv$ |
| $\vdash \vdash \vdash$ | 41       |          | -+       | $\dashv$ | $\dashv$ | +            | +         | $\dashv$   | $\dashv$ | $\dashv$  |                        | 91       | -               | +        | +        | +         | +        | +       | +       | - |          | 141        | -        | +        | +       | ╁╴       | ╁        | $\vdash \vdash$ | $\dashv$         | $\dashv$ |
| H                      | 42       |          | $\dashv$ | $\dashv$ | $\dashv$ | $\dashv$     | $\dashv$  | $\dashv$   | $\dashv$ |           | <b></b>                | 92       | $\dashv$        | +        | +-       | $\vdash$  | $\dashv$ | +       | +-      | 1 |          | 142        |          | -+       | +       | +-       | +        | $\vdash \vdash$ |                  |          |
|                        | 43       |          | $\top$   |          | 7        | $\dashv$     | 寸         | +          | _        | _         |                        | 93       | -               | +        | +        | $\vdash$  | $\dashv$ | +       | +-      | 1 |          | 143        | $\dashv$ |          | +-      | +        | ╁╌       | $\vdash$        | $\dashv$         | $\dashv$ |
|                        | 44       | $\dashv$ | 7        | $\dashv$ | 十        | _            | 寸         | 十          | $\dashv$ | 7         |                        | 94       | $\dashv$        | $\dashv$ | +        | $\vdash$  | +        | +       | +       |   |          | 144        | -        | +        | ╁       | +        | +        | $\vdash$        |                  | ᅱ        |
|                        | 45       |          | $\dashv$ | $\dashv$ | +        | $\dashv$     | $\dashv$  | _          | $\dashv$ | _         |                        | 95       | $\vdash$        | +        | $\dashv$ | +         | +        | +       | +-      |   |          | 145        | -        |          | +       | +        | +        | $\vdash$        | $\dashv$         |          |
|                        | 46       | 寸        | $\neg$   | $\top$   | 7        | $\neg$       | 7         | 7          | $\dashv$ | $\exists$ |                        | 96       |                 | $\dashv$ | +        | $\vdash$  | $\dashv$ | +       | +       | 1 |          | 146        |          | +        | +       | +        | +        | $\vdash$        | $\dashv$         | ᅱ        |
|                        | 47       | $\neg$   | 十        | 十        | 7        | 一            | $\exists$ | $\dashv$   | 寸        |           |                        | 97       | op              | +        |          | $\sqcap$  | 十        | 十       | 1       | 1 |          | 147        | -        | _        | +-      | +        | +        | H               | $\dashv$         | $\dashv$ |
|                        | 48       |          |          | $\Box$   |          |              | 丁         | _          |          |           |                        | 98       |                 | $\neg$   | 1        | 1-1       | ┪        | $\top$  | 1       |   |          | 148        | _        | $\dashv$ | 1       | $\top$   | †        | $\vdash$        | $\dashv$         | ᅥ        |
|                        | 49       |          |          | I        | T        |              |           |            |          |           |                        | 99       |                 |          | $\top$   |           | 1        | $\top$  | 1       | 1 |          | 149        |          | _        | $\top$  | $\top$   | 1        | $\Box$          | $\dashv$         | 一        |
|                        | 50       |          |          | $\prod$  |          | $\Box$       | I         |            |          |           |                        | 100      |                 |          |          |           |          |         |         |   |          | 150        | $\neg$   | $\neg$   | $\top$  | †        | $\top$   | 口               | $\neg$           |          |